

What is claimed is:

1. A system for making a biochemical assay of each of a plurality of provided specimens, the system comprising:
 - a. a plurality of receptacles, each receptacle for containing a respective specimen of the plurality of specimens, each receptacle comprising a surface for binding a paramagnetic particle to the surface;
 - b. a detector for providing a resistance responsive to paramagnetic particle proximity to the detector in accordance with a giant magnetoresistive effect;
 - c. a mechanism for positioning each respective surface in working proximity to the detector for providing a respective resistance; and
 - d. a controller for controlling the mechanism and for recording indicia of each respective resistance.
2. The system of claim 1 wherein a motion of a respective receptacle is substantially stopped while the respective resistance is provided by the detector.
3. The system of claim 1 wherein the detector comprising a multiplicity of physically defined active areas for independent detecting of each of a corresponding multiplicity of specimens of the plurality of specimens.
4. The system of claim 3 wherein:
 - a. each active area comprises a plurality of sensors each sensor comprising an independent resistance responsive to paramagnetic particle proximity to the respective sensor in accordance with a respective giant magnetoresistive effect; and
 - b. the controller further records indicia of resistance of each sensor.
5. The system of claim 4 wherein:
 - a. the detector comprises for each active area an integrated circuit comprising the plurality of sensors and a serial interface; and
 - b. the controller is coupled to each serial interface for receiving indicia of resistance.

6. The system of claim 3 wherein each respective active area is aligned below a respective specimen.

7. The system of claim 6 wherein a distance between a surface and an active area is reduced by operation of an atmospheric pressure above the surface.

8. The system of claim 3 wherein the mechanism comprises:

a. a disk for holding the plurality of specimens, the disk having a face and having an axis of rotation perpendicular to the face; and

b. a motor for rotating the disk about the axis to position a respective specimen held by the disk in working proximity to the detector.

9. The system of claim 8 wherein each receptacle is integral to the disk.

10. The system of claim 3 wherein the mechanism comprises:

a. a base for holding the plurality of specimens, the tray having a plurality of rows;
and

b. a motor for positioning a respective specimen held by the base in working proximity to the detector.

11. The system of claim 1 wherein the mechanism moves the detector.

12. The system of claim 4 wherein said receptacle is discarded and said sensor reused.

13. The system of claim 1 further comprising a console for operator controls, displays, and data processing, and a chemical analysis unit for performing said biochemical assay.

14. The system of claim 1 wherein said receptacles are placed in specimen trays which facilitate mechanical protection, identification, preparation, storage, handling and disposal of multiple specimen carriers.